REMARKS

Claims 1-3, 5, 6, 8-12, 14-20 and 22-25 have been examined on their merits.

Applicants herein editorially amend claims 1, 9, 18-20 and 22-26 to remove awkward phrasing. No new matter has been added. The amendments to claims 1, 9, 18-20 and 22-26 do not narrow the literal scope of the claims, were not made for reasons of patentability and thus, do not implicate an estoppel in the application of the doctrine of equivalents. Entry and consideration of the amendments to claims 1, 9, 18-20 and 22-26 respectfully requested.

Claims 1-3, 5, 6, 8-12, 14-20 and 22-25 are all the claims presently pending in the application.

1. Claims 1-3, 5, 6, 8-12, 14-20 and 22-25 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Uchiyama *et al.* (U.S. Patent No. 5,575,570) in view of Johnstone *et al.* (U.S. Patent No. 4,527,661). Applicants traverse the rejection of claims 1-3, 5, 6, 8-12, 14-20 and 22-25 for at least the reasons discussed below.

The initial burden of establishing that a claimed invention is *prima facie* obvious rests on the USPTO. *In re Piasecki*, 745 F.2d 1468, 1472 (Fed. Cir. 1984). To make its *prima facie* case of obviousness, the USPTO must satisfy three requirements:

a) The prior art relied upon, coupled with the knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the artisan to modify a reference or to combine references. *In re Fine*, 837 F.2d 1071, 1074 (Fed. Cir. 1988).

b) The proposed modification of the prior art must have had a reasonable expectation of success, as determined from the vantage point of the artisan at the time the invention was made. *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1209 (Fed. Cir. 1991).

c) The prior art reference or combination of references must teach or suggest all the limitations of the claims. *In re Vaeck*, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991); *In re Wilson*, 424 F.2d 1382, 1385 (CCPA 1970).

The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, the nature of a problem to be solved. *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999). Alternatively, the motivation may be implicit from the prior art as a whole, rather than expressly stated. *Id.* Regardless of whether the USPTO relies on an express or an implicit showing of motivation, the USPTO is obligated to provide particular findings related to its conclusion, and those findings must be clear and particular. *Id.* A broad conclusionary statement, standing alone without support, is not "evidence." *Id.; see also, In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001).

In addition, a rejection cannot be predicated on the mere identification of individual components of claimed limitations. *In re Kotzab*, 217 F.3d 1365, 1371 (Fed. Cir. 2000). Rather, particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed. *Id.*

Uchiyama *et al.* fail to teach or suggest a bearing with an amount of lubricating oil injected into a bearing space defined between bearing space sealing members, wherein the

amount of injected lubricating oil is: (1) in a range of 1 to 50% by volume of the bearing space, and (2) the injected amount excludes any lubricating oil preliminarily impregnated in a rolling element cage. The language of claims 1, 9 and 22-25 recites that the amount of lubricating oil injected into the bearing space is based upon the volume of the bearing space defined by the sealing members. In contrast, Uchiyama *et al.* disclose that the amount of lubricating oil used in a rolling bearing is the amount of oil (by weight) impregnated into the rolling element cage. While the Patent Office argues that the cage oil weights of Uchiyama are considered to generate volume percentages that overlap those recited in claims 1, 9 and 22-25 (*See, e.g.*, page 2 of the March 11, 2004 Non-Final Office Action), the Patent Office continues to ignore the plain language of claims 1, 9 and 22-25 that specifically excludes any lubricating oil that is impregnated in the rolling element cage from the volume-based amount of lubricating oil injected into the bearing space. As is plainly stated in the instant specification, the lubricating oil injected into the bearing space is different than the lubricating oil impregnated in a rolling element cage. *See, e.g.*, page 9, lines 8-12 of the instant specification. Moreover, nowhere has the Patent Office illustrated how one of ordinary skill in the art would allegedly derive the volume percentages recited in claims 1, 9 and 22-25 based on the oil weight percentages disclosed in Uchiyama *et al.*, especially in light of all the physical variables affecting the volume of the sealed bearing space.

If the Patent Office is arguing Uchiyama *et al.* inherently disclose injecting lubricating oil based on the to-be-sealed bearing space, then the Patent Office is required to provide a basis in fact and/or technical reasoning to support the argument that the inherent characteristics are

present in the teachings of Uchiyama *et al.* *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). At present, the Patent Office's argument with respect to the cage oil percentages lacks any factual or technical reasoning of how the lubricating oil impregnated in the rolling element cage of Uchiyama *et al.* meets the volume requirements for lubricating oil injected into the to-be-sealed bearing space.

Johnstone *et al.* disclose, *inter alia*, continuously supplying lubrication oil to a bearing using an atomizer (26), which is positioned outside the bearing (*See* Fig. 1 of Johnstone *et al.*). Johnstone *et al.* disclose a steady lubricating system wherein lubricant is continuously applied from the outside of the bearing on the exposed portion of the bearing, and not directly injected into a to-be-sealed bearing space as recited in the instant claims. Moreover, Johnstone *et al.* do not teach or suggest that the predetermined amount of the lubricant oil used is in a range of 1 to 50% by volume of the bearing space defined by a set of sealing members (*See* claims 1, 9, 18-20, 22 and 23 of the instant application). Instead, Johnstone *et al.* disclose controlling the volume of oil in an oil-air lubricating mixture sprayed on the outside of a bearing. *See, e.g.*, col. 3, line 30 to col. 4, line 3 of Johnstone *et al.* The microcomputer (20) of Johnstone *et al.* controls the volume of oil in the oil-air mist based upon the bearing temperature, as shown in Fig. 2. Johnstone *et al.* do not define a bearing volume that serves as a basis for determining a volume of lubricating oil that is confined within the bearing volume, or for that matter, as a basis for controlling the oil-air mist sprayed on the bearing. Since the bearing of Johnstone *et al.* is not sealed (as it would have to be in order to receive the spray of the oil-air mist from the atomizer), Johnstone *et al.* clearly lack any teaching, inherent or otherwise, of using a lubricating oil in a

sealed bearing space defined by sealing elements, wherein the amount of lubricating oil used is determined by the volume of the bearing space.

With respect to independent claim 1, the combination of Uchiyama *et al.* and Johnstone *et al.* fails to teach or suggest a bearing with an amount of lubricating oil injected into a bearing space defined between bearing space sealing members, wherein the amount of injected lubricating oil is: (1) in a range of 1 to 50% by volume of the bearing space, and (2) the injected amount excludes any lubricating oil preliminarily impregnated in a rolling element cage. At best, the combination of Uchiyama *et al.* and Johnstone *et al.* discloses an unsealed bearing comprising an oil delivery device that disperses an oil-air mixture into the unsealed bearing based on temperature readings. As discussed in the paragraphs above, neither Uchiyama *et al.* nor Johnstone *et al.* disclose several of the features of the present invention, *i.e.*, at least that the amount of injected lubricating oil is in a range of 1 to 50% by volume of the to-be-sealed bearing space and that the amount of lubricating oil injected into the to-be-sealed bearing space excludes any lubricating oil preliminarily impregnated in a rolling element cage. The Patent Office has expressly admitted that Uchiyama *et al.* does not disclose providing lubricating oil, exclusive of any lubricating oil preliminarily impregnated in a rolling cage, based on the volume of the to-be-sealed bearing space. *See* page 2 of the March 11, 2004 Non-Final Office Action. Although the Patent Office alleges that Johnstone *et al.* disclose the conventionality of providing lubricating oil to a bearing in the non-cage claimed percentages, the claimed percentages are based on to-be-sealed volume, and not temperature, as disclosed by Johnstone *et al.* There is simply no teaching or suggestion in the combination of Uchiyama *et al.* and Johnstone *et al.* of a linkage between a

lubricating oil amount and a sealed bearing space volume. Thus, Applicants submit that the Patent Office cannot fulfill the "all limitations" prong of a *prima facie* case of obviousness, as required by *In re Vaeck.*

Applicants submit that one of skill in the art would not be motivated to combine the two references. *In re Dembiczak* and *In re Zurko* require the Patent Office to provide particularized facts on the record as to why one of skill would be motivated to combine the two references. Without a motivation to combine, a rejection based on a *prima facie* case of obviousness is improper. *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998)). The level of skill in the art cannot be relied upon to provide the suggestion to combine references. *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308 (Fed. Cir. 1999). The Patent Office must make specific factual findings with respect to the motivation to combine references. *In re Lee*, 277 F.3d 1338, 1342-44 (Fed. Cir. 2002). Although the Patent Office provides a motivation analysis with respect to wear prevention, both Uchiyama *et al.* and Johnstone *et al.* lack any teaching about the desirability of at least a volume-based amount of lubricating oil injected into a to-be-sealed bearing space, wherein the injected amount specifically excludes any lubricating oil preliminarily impregnated in a rolling element cage. Thus, Applicants submit that the Patent Office cannot fulfill the motivation prong of a *prima facie* case of obviousness, as required by *In re Dembiczak* and *In re Zurko*. Based on the foregoing reasons, Applicants submit that the combination of Uchiyama *et al.* and Johnstone *et al.* fails to teach or suggest all of the claimed elements as arranged in claim 1. Therefore, the combination of Uchiyama *et al.* and Johnstone *et al.* clearly cannot render the present invention obvious as recited in claim 1. Thus, Applicants submit that claim 1 is

allowable, and further submit that claims 2, 3, 5, 6 and 8 are allowable as well, at least by virtue of their dependency from claim 1. Applicants respectfully request that the Patent Office withdraw the § 103(a) rejection of claims 1-3, 5, 6 and 8.

Independent claims 9 and 22-25 each have recitations that are similar to claim 1, namely a bearing with an amount of lubricating oil injected into a to-be-sealed bearing space, wherein the amount of injected lubricating oil is: (1) in a range of 1 to 50% by volume of the bearing space, and (2) the injected amount excludes any lubricating oil preliminarily impregnated in a rolling element cage. Applicants submit that the combination of Uchiyama *et al.* and Johnstone *et al.* does not teach or suggest all the recitations of claims 9 and 22-25 at least for the same reasons set forth above with respect to claim 1. Applicants respectfully request that the Patent Office withdraw the § 103(a) rejection of claims 9 and 22-25.

For claim 18, the combination of Uchiyama *et al.* and Johnstone *et al.* does not teach or suggest a bearing comprising a lubricating oil contained in a sealed bearing space, wherein the amount of contained lubricating oil is: (1) in a range of 1 to 50% by volume of the bearing space, and (2) the contained amount excludes any lubricating oil preliminarily impregnated in a rolling element cage. The language of claim 18 specifies that the amount of lubricating oil contained in the sealed bearing is based upon the volume of the bearing space defined by the sealing members. In contrast, Uchiyama *et al.* disclose that the amount of lubricating oil used in a rolling bearing is the amount of oil impregnated into a rolling element cage. Again, while the Examiner argues that the cage oil percentages of Uchiyama are considered to generate volume percentages that overlap those recited in claim 18, in fact the language of claim 18 specifically

excludes any lubricating oil impregnated in the rolling element cage from the volume-based amount contained in the sealed bearing. *See, e.g.,* page 9, lines 8-12 of the instant specification. As noted above, the Examiner's inherency argument with respect to the cage oil weights lacks any factual or technical reasoning of how one of ordinary skill in the art would allegedly derive the volume requirements of claim 18 from the oil weight disclosure of Uchiyama *et al.*

The combination of Uchiyama *et al.* and Johnstone *et al.* fails to teach or suggest a bearing with an amount of lubricating oil contained in a bearing space defined between bearing space sealing members, wherein the amount of lubricating oil is: (1) in a range of 1 to 50% by volume of the bearing space, and (2) the amount of lubricating oil excludes any lubricating oil preliminarily impregnated in a rolling element cage. At best, the combination of Uchiyama *et al.* and Johnstone *et al.* discloses an unsealed bearing comprising an oil delivery device that disperses an oil-air mixture into the unsealed bearing based on temperature readings. As discussed in the paragraphs above with respect to claims 1, 9 and 22-25, neither Uchiyama *et al.* nor Johnstone *et al.* disclose several of the features of the present invention, *i.e.*, at least that the amount of lubricating oil is in a range of 1 to 50% by volume of the sealed bearing space and that the amount of lubricating oil contained in the to-be-sealed bearing space excludes any lubricating oil preliminarily impregnated in a rolling element cage. The Patent Office has expressly admitted that Uchiyama *et al.* does not disclose providing lubricating oil, exclusive of any lubricating oil preliminarily impregnated in a rolling cage, based on the volume of the to-be-sealed bearing space. *See* page 2 of the March 11, 2004 Non-Final Office Action. Although the Patent Office alleges that Johnstone *et al.* disclose the conventionality of providing lubricating

oil to a bearing in the non-cage claimed percentages, the claimed percentages are based on to-be-sealed volume, and not temperature, as disclosed by Johnstone *et al.* There is simply no teaching or suggestion in the combination of Uchiyama *et al.* and Johnstone *et al.* of a linkage between a lubricating oil amount and a sealed bearing space volume. Thus, Applicants submit that the Patent Office cannot fulfill the "all limitations" prong of a *prima facie* case of obviousness, as required by *In re Vaeck.*

Applicants submit that one of skill in the art would not be motivated to combine the two references. Although the Patent Office provides a motivation analysis with respect to wear prevention, both Uchiyama *et al.* and Johnstone *et al.* lack any teaching about the desirability of at least a volume-based amount of lubricating oil contained in a sealed bearing space, wherein the contained amount specifically excludes any lubricating oil preliminarily impregnated in a rolling element cage. Thus, Applicants submit that the Patent Office cannot fulfill the motivation prong of a *prima facie* case of obviousness, as required by *In re Dembiczak* and *In re Zurko.*

Based on the foregoing reasons, Applicants submit that the combination of Uchiyama *et al.* and Johnstone *et al.* fails to teach or suggest all of the claimed elements as arranged in claim 18. Therefore, the combination of Uchiyama *et al.* and Johnstone *et al.* clearly cannot render the present invention obvious as recited in claim 18. Thus, Applicants submit that claim 18 is allowable, and respectfully request that the Patent Office withdraw the § 103(a) rejection of claim 18.

Independent claims 19 and 20 each have recitations that are similar to claim 18, namely a bearing comprising a lubricating oil contained in a sealed bearing space, wherein the amount of

contained lubricating oil is: (1) in a range of 1 to 50% by volume of the bearing space, and (2) the contained amount excludes any lubricating oil preliminarily impregnated in a rolling element cage. Applicants submit that the combination of Uchiyama *et al.* and Johnstone *et al.* fails to teach or suggest all of the claimed elements as arranged in claims 19 and 20 for the same reasons set forth above with respect to claim 18. Thus, Applicants submit that claims 19 and 20 are allowable, and respectfully request that the Patent Office withdraw the § 103(a) rejection of claims 19 and 20.

2. Claims 10-12, 14-17, 24 and 25 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Uchiyama *et al.* in view of Johnstone *et al.* and in further view of Official Notice of common knowledge in the art. Applicants traverse the rejection of claims 10-12, 14-17, 24 and 25 for at least the reasons discussed below.

Applicants traverse the Patent Office's reliance of Official Notice of common knowledge in the art. The Patent Office has cited Mouri *et al.* for the disclosure of an actuator. To the extent that the Patent Office's Official Notice goes beyond Mouri *et al.*'s disclosure of an actuator, Applicants traverse the Official Notice and note that the Patent Office has not cited any prior art that discloses a bearing comprising an amount of lubricating oil that in a sealed bearing space, and wherein the amount of lubricating oil in the sealed bearing space is based on the volume of the sealed bearing space, and the amount of lubricating oil excludes any lubricating oil preliminarily impregnated in a rolling element cage. Moreover, the Patent Office may not rely on Official Notice, or judicial notice, or a mere statement of obviousness at the exact point where

patentable novelty is argued, but must come forward with pertinent prior art. *See Ex parte Cady*, 148 U.S.P.Q. 162 (Bd. of App. 1965).

The combination of Uchiyama *et al.*, Johnstone *et al.* and common knowledge in the art fails to teach or suggest a bearing with an amount of lubricating oil injected into a to-be-sealed bearing space, wherein the amount of injected lubricating oil is: (1) in a range of 1 to 50% by volume of the bearing space, and (2) the injected amount excludes any lubricating oil preliminarily impregnated in a rolling element cage. The language of claims 10, 24 and 25 specifies that the amount of lubricating oil injected into the bearing is based upon the volume of the bearing space defined by the sealing members. In contrast, the combination of Uchiyama *et al.*, Johnstone *et al.* and common knowledge in the art discloses that the amount of lubricating oil used in a rolling bearing is the amount of oil impregnated into a rolling element cage. While the Patent Office argues that the combination of Uchiyama *et al.*, Johnstone *et al.* and common knowledge in the art discloses the lubricating oil volume percentages, the language of claims 10, 24 and 25 specifically excludes any lubricating oil impregnated in the rolling element cage from the volume-based amount of injected lubricating oil. In the combination of Uchiyama *et al.*, Johnstone *et al.* and common knowledge in the art, the lubricating oil is already contained in the rolling element cage, and an amount of injected lubricating oil, based on bearing space volume and excluding any oil impregnated in the rolling element cage, is neither taught nor suggested. Furthermore, Johnstone *et al.* disclose spraying an oil-air mist on a bearing based on temperature, and the volume of the oil-air mist is not controlled based on volume of a to-be-sealed bearing space. Based on the foregoing reasons, Applicants submit that Patent Office has

not met the "all limitations" prong of a *prima facie* case of obviousness, as required by *In re Vaeck.*

The Patent Office has not provided any clear and particularized findings with respect to motivation to combine Uchiyama *et al.*, Johnstone *et al.* and alleged common knowledge in the art, as required by *In re Dembiczak* and *In re Zurko.* Since the Patent Office has not provided any reasoning whatsoever with respect to motivation to combine other than the addition of an actuator element, Applicants submit that Patent Office has not met the motivation prong of a *prima facie* case of obviousness.

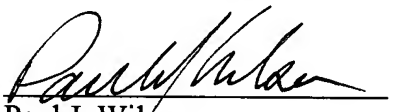
Thus, Applicants submit that claim 10 is allowable, and further submit that claims 11, 12 and 14-17 are allowable as well, at least by virtue of their dependency from claim 10. Applicants respectfully request that the Patent Office withdraw the § 103(a) rejection of claims 10-12 and 14-17.

Independent claims 24 and 25 each have recitations that are similar to claim 10, namely a bearing with an amount of lubricating oil injected into a to-be-sealed bearing space, wherein the amount of injected lubricating oil is: (1) in a range of 1 to 50% by volume of the bearing space, and (2) the injected amount excludes any lubricating oil preliminarily impregnated in a rolling element cage. Applicants submit that the combination of Uchiyama *et al.*, Johnstone *et al.* and common knowledge in the art does not render the recitations of claims 24 and 25 obvious for the same reasons set forth above with respect to claim 10. Therefore, Applicants submit that claims 24 and 25 are allowable over the combination of Uchiyama *et al.*, Johnstone *et al.* and common knowledge in the art.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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